

REMARKS

OBJECTION TO THE SPECIFICATION:

The abstract has been amended to delete any reference to “the invention”, which Applicant understood to be the basis of the Examiner’s remaining objection to the specification.

FIRST REJECTION UNDER 35 U.S.C. § 102:

Claims 1–3, 5, 8, 9, and 13–15 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 4,315,300 (“Parmerlee”). In response, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection in view of the following:

As the examiner is undoubtedly aware, any rejection under 35 U.S.C. § 102 must show how every element of the claimed invention is disclosed in the allegedly anticipating reference. Applicant respectfully submits that Parmerlee does not disclose or suggest every element of the claims as amended. In particular, Parmerlee does not disclose a cooling system adapted to remove heat from the air exiting an enclosure. It is apparent from Figures 2 and 3 of Parmerlee that the cooling system disclosed therein operates to remove heat from air contained within the enclosure 31 by circulating air over a number of cooling coils contained within the enclosure. Referring to Figure 2, the air within any particular enclosure 31 is circulated in a counterclockwise direction by fans 41 and 42, which blow air downward through banks 21, 23, 25, 27 and upward through banks 28, 26, 24, and 22. In effect, Parmerlee does not disclose air entering or exiting the enclosure at all. Thus Parmerlee does not disclose the structure expressly required by claims 8 and 13, which includes an enclosure having an air inlet and an air outlet. Similarly, Parmerlee does not disclose drawing air into an enclosure, heating the air, then cooling the air in an air-liquid heat exchanger before returning the air to the environment surrounding the enclosure as required by claim 16.

In view of the above, Applicant requests the reconsideration and withdrawal of the rejection of claims 1–3, 5, 8, 9, and 13–15 over Parmerlee and ask that the Examiner indicate the allowance of these claims in the next communication from the Office.

REJECTION UNDER 35 U.S.C. § 103:

Claims 4 and 10 also stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Parmerlee. Applicant respectfully traverses this rejection as well. Claims 4 and 10 depend directly from claims 3 and 9 respectively, and indirectly from claims 1 and 8 respectively, each of which is allowable over Parmerlee for the reasons explained above. Accordingly, Applicant respectfully requests that the rejection of claims 4 and 10 also be reconsidered and withdrawn.

SECOND REJECTION UNDER 35 U.S.C. § 102:

Claims 1, 3, and 6 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,471,850 (Cowans). Applicant respectfully requests that the Examiner reconsider and withdraw this rejection of the claims. Cowans does not disclose or suggest a system that operates in accordance with the present invention, in which flowing air cools the heat-generating equipment and is in turn cooled by an air-to-liquid heat exchanger as it exits the enclosure. Cowans specifically states in column 2 at lines 32–34 that “Refrigerant in the gas phase is delivered internally to a cold probe in contact with a heat sink that is conductively coupled to an individual circuit unit.” In other words, the Cowans device operates by cooling individual components with cold probes through direct thermal contact with heat sinks on the components. This is fundamentally different than air-cooling the components as recited in the claims. The Cowans device also provides a backup air-cooling system, but that system does not include air-to-liquid heat exchangers as required by the present claims, nor could the backup system be described even remotely as operating on the air exiting an enclosure. Rather, the backup system operates by employing the excess heat (i.e. heat not removed by the cold probe system) to boil a liquid refrigerant 62 contained in a cavity 60 within the heat sink 22, which is then condensed by releasing its heat to the air proximate the heat sink via a heat exchanger 66. Thus heat is transferred from the components to the refrigerant, and then to the air—exactly the opposite of the way the present system works.

Given the clear distinction between the present invention and the device disclosed in Cowans, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 1, 3 and 6 over Cowans.

THIRD REJECTION UNDER 35 U.S.C. § 102:

Claims 1, 3, 6, 8, 9, and 13–16 have been rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,205,796 (Chu et al.). Applicant respectfully requests that the Examiner reconsider and withdraw this rejection because Chu does not teach or suggest every element of the claimed invention. Specifically, as is the case with Parmerlee, Chu does not disclose or suggest an enclosure cooling system in which the air passes through the enclosure and the exiting air is cooled by an air-to-liquid heat exchanger. As in Parmerlee, the cooling system in Chu is essentially self-contained, though in Chu a limited amount of air from enclosure 10 is circulated through the dehumidifier system 30 and some makeup air is provided as well. Even so, Chu fails to disclose several elements of the present invention. In particular, Chu does not disclose a system in which the air exiting the enclosure is cooled. Rather, it is plain from the airflow pattern shown in Figure 1 that Chu contemplates blowing air first over the heat exchanger 60 or 60' and then over the components to be cooled. Thus the exchanger 60 or 60' is not disposed to remove heat from air exiting the enclosure after contacting the components, as each of the claims requires. Accordingly, Applicant respectfully requests that the rejection of the claims over Chu be reconsidered and withdrawn.

In view of the above remarks, Applicant respectfully submits that all pending claims are now in condition for allowance and requests that the Examiner so indicate in the next communication from the Office.

The undersigned representative requests a **one-month extension of time** of the period for response, to and including August 26, 2004, as well as any further extension of time that may be deemed necessary to further the prosecution of this application.

The undersigned representative authorizes the Commissioner to charge the extension fee of \$110.00 under 37 C.F.R. § 1.17(a)(1), as well as any additional fees under 37 C.F.R. § 1.16 or



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1.17 that may be required, or credit any overpayment, to **Deposit Account No. 01-2508**, referencing **Order No. 11564.0034.NPUS01**.

Applicant invites the Examiner to contact the undersigned representative by telephone to discuss any issues or questions presented by this paper.

Respectfully submitted,

A handwritten signature in cursive script, reading 'Ira D. Finkelstein'.

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Date: August 16, 2004